

SCOPE OF PATENT CLAIMS

1. An audio amplifier comprising:

a sampling rate converter circuit for converting a sampling rate of a first digital audio signal with a first clock synchronized thereto and with a second clock having a stable and predetermined frequency into a second digital audio signal synchronized with the second clock;

a $\Delta\Sigma$ modulation circuit for re-quantizing the second digital audio signal into a bit-reduced third digital audio signal;

a PWM modulation circuit for converting the third digital audio signal to a PWM signal;

a D-class power amplifier supplied with the PWM signal outputted from the PWM modulation circuit;

a dither signal forming circuit for superimposing a dither signal on the third digital audio signal by supplying the dither signal to the $\Delta\Sigma$ modulation circuit; and

a muting signal forming circuit; wherein

an input side of the sampling rate converter circuit is stopped by the muting signal upon muting.

2. The audio amplifier as cited in claim 1, wherein

when the first digital audio signal becomes a asynchronous state, the muting signal forming circuit is set to be a asynchronous detection circuit for detecting it, and the detection signal of this asynchronous detection circuit is set to be the muting signal.